SLOVENSKI STANDARD
kSIST FprEN 15651-2:2016

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Tesnilne mase za nekonstrukcijske stike v stavbah in na površinah za pešce - 2. del: Tesnilne mase za zasteklitev

Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 2: Sealants for glazing

Fugendichtstoffe für nicht tragende Anwendungen in Gebäuden und Fußgängerwegen - Teil 2: Fugendichtstoffe für Verglasungen

Mastics pour joints pour des usages non structuraux dans les constructions immobilières et pour chemins piétonniers - Partie 2 : Mastics pour vitrage

Ta slovenski standard je istoveten z: **FprEN 15651-2**

ICS:

91.100.50 Veziva. Tesnilni materiali Binders. Sealing materials

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FINAL DRAFT
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English Version

Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 2: Sealants for glazing

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This draft European Standard is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 349.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (FprEN 15651-2:2016) has been prepared by Technical Committee CEN/TC 349 “Sealants for joints in building construction”, the secretariat of which is held by AFNOR.

This document is currently submitted to the Unique Acceptance Procedure.

This document will supersede EN 15651-2:2012.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic work requirements of EU Regulation.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

This document is one part of the product European Standards within the framework series of EN 15651 on *Sealants for non-structural use in joints in buildings and pedestrian walkways*, as follows:

— *Part 1: Sealants for facade elements,*

— *Part 2: Sealants for glazing* (this document),

— *Part 3: Sealants for sanitary joints,*

— *Part 4: Sealants for pedestrian walkways,*

— *Part 5: Evaluation of conformity and marking, marking and labelling.*

The following significant technical changes have been implemented in this new edition:

— Clause 4.1.3 and Clause 5 have been improved;

— Clause 7 and Annex ZA have been changed in accordance with the regulation (EU) No.305/2011.

1 Scope

This European Standard specifies definitions and requirements for non-structural elastic sealants used for sealing glazing in building construction applications.

It covers glazing joints from 7° horizontal. Main areas of application are:

— glass to glass;

— glass to frame;

— glass to porous substrates.

Excluding aquariums, structural bonding/glazing, inner and outer seal to manufacture insulated glazing units, horizontal glazing (below 7°), organic glass (e.g. polycarbonate, PMMA, etc.).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests*

FprEN 15651-5:2016, *Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 5: Evaluation of conformity and marking*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 2811-1:2016, *Paints and varnishes — Determination of density — Part 1: Pyknometer method (ISO 2811-1:2016)*

EN ISO 6927:2012, *Buildings and civil engineering works - Sealants - Vocabulary (ISO 6927:2012)*

EN ISO 7389, *Building construction - Jointing products - Determination of elastic recovery of sealants (ISO 7389)*

EN ISO 7390, *Building construction - Jointing products - Determination of resistance to flow of sealants (ISO 7390)*

EN ISO 8339, *Building construction - Sealants - Determination of tensile properties (Extension to break) (ISO 8339)*

EN ISO 8340, *Building construction - Sealants - Determination of tensile properties at maintained extension (ISO 8340)*

EN ISO 9047, *Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at variable temperatures (ISO 9047)*

EN ISO 10563, *Building construction - Sealants - Determination of change in mass and volume (ISO 10563)*

EN ISO 10590, *Building construction - Sealants - Determination of tensile properties of sealants at maintained extension after immersion in water (ISO 10590)*

EN ISO 11358 (all parts), *Plastics — Thermogravimetry (TG) of polymers — General principles (ISO 11358)*

EN ISO 11431, *Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants after exposure to heat, water and artificial light through glass (ISO 11431)*

EN ISO 11432, *Building construction - Sealants - Determination of resistance to compression (ISO 11432)*

EN ISO 11600, *Building construction - Jointing products - Classification and requirements for sealants (ISO 11600)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*

ISO 13640, *Building construction — Jointing products — Specifications for test substrates*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 6927:2012 and the following apply.

3.1
non-reactive sealant
mainly physical drying mechanism, without significant change in the molecular weight of the main polymer

3.2
reactive sealant
mainly curing by chemical reaction, with significant increase of the molecular weight of the main polymer

3.3
cure
irreversible transformation of a sealant from a liquid or paste-like state into a hardened or rubber-like solid state

3.4
uncured/wet
state of a sealant prior to the above transformation

4 Requirements

4.1 Identification requirements and test methods

4.1.1 Short description of the sealant

The short description of the non-structural sealant for glazing elements shall include: brand name, type (general chemical family), opaque or translucent, waterborne or solvent based or solvent free, reactive or non-reactive, and one or multi-component (e.g. neutral cure, reactive silicone and one component, etc.).

The primer shall be stated for the substrate concerned if relevant (name, chemical type, etc.).

4.1.2 Thermogravimetric test

The test shall be carried out in accordance with EN ISO 11358 on the uncured or wet sealant, between 35 °C to 900 °C, temperature slope 10 °C/min, non-oxidative condition (e.g. nitrogen). A single sample shall be used for this test. A single specimen may be tested and there shall be no significant difference between the reference curve and derivative (profile).

In the case of multi-component sealant, each component shall be evaluated (if relevant).

4.1.3 Density

4.1.3.1 Principal

A pyknometer is filled with the product under test. The density is calculated from the mass of the product in the pyknometer and the known volume of the pyknometer.

4.1.3.2 Method

A test temperature of (23,0 ± 0,5) °C shall be used and the test sample and pyknometer shall be conditioned to this temperature, and it shall be ensured that the temperature variation does not exceed 0,5 °C during testing.

The determination of the density shall be in accordance with EN ISO 2811-1:2016 and should be carried out using a suitable 50 cm^3 calibrated pyknometer as described in EN ISO 2811-1:2016, 6.1.1. An alternative is the 50 cm^3 Hubbard pyknometer as described in ISO 3507.

Measurements should be carried out on the uncured or wet sealant and in the case of a multi-component sealant, each component shall be evaluated. At least three samples shall be tested. The specific pyknometer used and the mean value, recorded to two decimal places, shall be declared. The tolerance of the declared values shall be within ± 5 %.

4.1.4 Hardness (indentation) test (Shore Hardness)

The determination of the indentation hardness shall be in accordance with EN ISO 868. The test shall be performed on the cured or dried sealant.

The exact conditions of test shall be defined by the manufacturer, i.e. thickness, cure/drying times and temperature and relative humidity, specific hore type (A, D…), test time, temperature, etc.

At least three samples shall be tested and the five measurements taken per sample. The mean value and tolerances of all measurements, recorded to the nearest unit, shall be declared.

4.2 Conditioning, test procedure and substrates

When determining the classification of a glazing sealant according to the requirements of this standard, the same conditioning procedure shall be used in all relevant test methods (use only Method A or Method B). For each test method, three test specimens for each substrate shall be tested. The same batch of sealant (and primer, if used) shall be used in all tests. The same substrates (material and surface finish) shall be used in all tests. Tests shall be performed on glass according to ISO 13640.